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Abstract

This paper uses Revans' theory of action learning to understand cases of collective IT development- and implementation projects within a multi-national company. It means having to deal with an international project, cultural differences, differences in levels of knowledge and differences in the organizational structure. In action learning, the discussions take the form of reciprocal teaching and group problem-solving situations, trying to reach consensus concerning meaning, relevance and importance of certain aspects, questioning, evaluating and criticising each other, thereby pushing for higher levels of understanding, satisfactory explanations and clarifications. What is most important is that the group members help each other to understand, thereby overcoming the differences in knowledge within the group. This is an ongoing process partly because some group members left and others took their place.

Keywords IT development, IT implementation, multinational project team, organizational learning, action learning, learning process.

Introduction

Of late business journals pay a lot of attention to the idea of knowledge management, often giving the impression that it is a new concept. But for the most part it is just a new label for an old theme. As early as the 1960's Reginald Revans wrote about the need for managers to learn in practice and the need for companies to stimulate their employees to learn *from* and ***with*** each other throughout the entire organisation. Revans was convinced that knowledge was not the privilege of those higher in the organisation but that knowledge was also to be found on the shop-floor. It was at least as

important to get knowledge from the shop-floor up to the management as the other way around (Revans, 1971). We will come back to Revans' ideas, which culminated in the theory of action learning, later on in this paper.

An international lease company, Lease Company Holding or LCH (a pseudonym), acknowledges the importance of these learning processes in organizing their first international Information Technology (IT) development and implementation project. Instead of applying a centrally controlled planning, LCH unknowingly applied the idea of action learning in the development of the Core Leasing System (CLS), a distributed database for multi-country purpose. This way LCH wished to enhance acceptance by the business units, by virtue of their active involvement. Besides, it was thought to be the best way to deal with the differences in knowledge, culture and organisation that were present in the group. The use of this particular learning process in making the Core Leasing System is the subject of this paper. Via a brief overview of the theory of cognitive learning and some aspects of the concept of organisational learning, we give a short account of the theory of action learning. This theory will be used to inform our study of the project Core Leasing System at Lease Company Holding.

Theory of cognitive learning

We briefly discuss the theory of cognitive learning, because it has a lot in common with the theory of action learning. The theory of cognitive learning sees the learner as an active constructor and places learning in the context in which it takes place (Brown, 1994; Brown and Campione, 1994). It invloves the concept of a 'community of learners' which accounts for the influence of common knowledge, beliefs and expectations when learning takes place (Brown, 1994). These learning communities are based on the idea that knowledge is situated in activities and does not reside in individual heads. The community contains actors and an audience, whereby everybody plays both roles, though not at the same time. The audience demands coherence from the actor, pushes for higher levels of understanding, requires satisfactory explanations, requests clarification of obscure thoughts etc... (Brown, 1994). In other words, a community of learners stimulates active exchange and reciprocity which implies that new ideas are expressed in discussion.

In the concept of reciprocal teaching support is offered to learners of varying abilities. This concept is strongly related to the concept of the community of learners. Reciprocal teaching facilitates group co-operation whereby everyone is trying to reach consensus concerning meaning, relevance and importance. This ensures that understanding occurs even if some members of the group are not yet capable of full participation. Through discussions thoughts are extemalised. Therefore beginners can learn from the contributions of those who are more experienced.

The last concept of the cognitive learning is the concept of group problem-solving situations (Brown et al. 1989). They offer opportunities for learning that go beyond the mere acquisition of facts because they encourage questioning, evaluating and criticising of knowledge. This often involves conceptual change or restructuring which are more likely to happen when someone has to explain, defend or elaborate his position to others and to himself. A big advantage of this kind of learning is that the group members collaborate to solve the problem, thereby distributing the thinking load, jointly managing the argument construction and sharing potential argument roles and strategies that otherwise an individual would have to perform on his own. Within the group the members play different thinking roles like the executive or doer, the sceptic or critic, the instructor or educator, the record keeper and the conciliator (Brown et al, 1989). Because of the interaction in the group, the learning changes and ***the entire group learns something new.*** In other words, the dynamics of a group learning together ***generates*** new knowledge.

Obviously the boundary between individual learning and group learning is blur. In addition, both have to be differentiated from what has come to be called organisational learning.

Organizational Learning

In this paper we use the following definition of organisational learning:

> Based on behavioural studies of organizations, organizations are seen as learning by encoding inferences from history into routines that guide behaviour. The generic term "routines" include the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate. It also includes the structures of beliefs, frameworks, paradigms, codes, cultures, and knowledge that buttress, elaborate, and contradict the formal routines. Routines are independent of the individuals actors who execute them and are capable of surviving considerable turnover in individuals (Levitt and March 1996).

It is a broad definition which covers much of the actions and behaviours of learning organizations. It talks about the knowledge dimension of learning within and by organizations, but also much about the organizational dimensions of learning within and by organizations. It is some of these organizational aspects that make it different from action learning. However we will limit ourselves here, because all that matters in the scope of this paper is that organisational learning and action learning have both similarities and differences, as we would indicate in the course of the paper.

The concept of Action Learning

'The suggestion that any organisation ought to be able to learn from its own everyday experience, simply by asking itself what it thinks it is trying to do, what is preventing from doing it and what measures it might take to overcome its problems and to move nearer to its goals, is still regarded by students and practitioners of administrative science as unrealistic nonsense' (Revans, 1980).

Revans probably wrote this in the late seventies. Nevertheless he hardly ever gets the credit he deserves for laying the groundwork, for identifying the need for organisations to learn from and with each other and for identifying the concept of action learning. To the best of our knowledge only two authors, Dixon (1994) and Garratt (1987), acknowledge Revans' attribution to the field. The first one dedicates her book on organisational learning cycles to him using the following words: 'this book is dedicated to Reg Revans whose thinking has been so far ahead of his time, that after 50 years, the world is only just catching up' (Dixon, 1994). What probably happened is that, because his ideas differed too much from what was common knowledge in those days. It was a common practice to have an expert solve the problem for which there was only one solution, which was at the same time the right solution. In such an intellectual atmosphere his books never left the shelves and his ideas were not followed. Nowadays his perceptions are more widely accepted: 'The opinion of the expert is still considered but not as the only possible solution. Now organisations feel that the resolution of difficult issues is found in the reasoning and learning capability of organisational members', (Dixon, 1994).

It is not an easy task to summarise what Revans meant by action learning. The problem is that there are only the stories of past action learning programmes and what the participants achieved in their projects, which form the bases for his books (Revans, 1980). This is what action learning distinguishes from other learning programs that use an instructor and books, it is something that has to happen in practice.

The idea behind the concept of action learning is that normal management education programmes are not sufficient, they rely too much on the so-called experts and depart too much from everyday reality that managers have to deal with. Therefore the best way for managers to learn is in practice, together with others who are in the same situation. Learning in Revans' view is the ability of the manager to 'identify the discrepancies between what he first took to be the condition and what operational experience suggests that the condition actually was, and insofar as he is able to change his perception accordingly' (Revans, 1971,1980). In other words: to know something is to do something better, therefore you should find out what it is you do now and improve upon it. Revans emphasises the need for a manager to understand himself, to learn to question his own perceptions,

his own beliefs, his own values, his own decision-taking process (Revans, 1966). The success of the manager at taking action for the organisation depends on the co-operation of others. Put differently whether or not the manager learns partly depends on the co-operation of others. This is what Revans tries to achieve in an action learning group: because the others in the group have different perceptions, beliefs and values, everyone has to reconsider their own ones constantly and defend them towards the others or accept that someone else's are better,' . ..inherent mutual criticism: participants question each others approaches...' (Revans 1980). Action learning is about constant confrontation.

Garratt (1987) takes exactly the same approach to action learning, which he calls self-help groups. In his view action learning groups are designed so that participants discuss observations, constructively criticise hypotheses, and give support to 'their comrades in adversity' while action and reaction to their plans take place in their organisations.

The concept of 'Team learning' which was introduced by Senge (1990) also borrows heavily from the concept of action learning. The teams consist of management members, product development members or cross-functional taskforces. Team learning is a team skill, teams have to learn how to learn together. In this way, they become a microcosm for learning throughout the organisation.

Obviously Revans attributes more value to the experience of practice itself than the experience of theory about practice. In other words, to actually take action is more important and more valuable than to talk about taking action. Someone can only learn from what he sees are the results of his deliberate decisions. The inputs to learning have to come from his own outputs: 'to learn to take action, one needs to take action and see the effect of actually taking action, instead of seeing the effect of talking about action' (Revans, 1971).

The term action learning actually implies a change in two different places: the manager has to deal with a system of which he is not in command. He can not change it unless he himself is also changed in the process, both changes are thus in correspondence: ***the*** change ***in the system is action, the change in himself is learning.*** Therefore learning how to act effectively is learning how to learn effectively. Action learning stimulates both (Revans, 1980).

In practice an action learning programme consists of '... the set, or small group of comrades in adversity, striving to learn ***with*** and ***from*** each other as they confess their failures and expand upon their victories' (Revans, 1980). This small group can take several forms: it may be several people from different layers within one organisation (shop floor, middle management, top management), it may be a group of peers that work in the same branch or industry but not in the same company or it may be a group of peers from very different industries. Together they try to identify: what are our objectives, What is hindering our achievement of them and how do we overcome it? Because the

members in the group are unfamiliar with the particular problem at hand or with the company that it concerns or with the context with which the company has to deal, some of them will have a fresh advance in that they do not suffer from any preconceived ideas, thereby offering the group a better opportunity to learn. The managers have to take action to solve the problems they are facing, by taking action and talking to each other about what they are facing, how they think they will solve it and how they feel about it, they learn *from* and ***with*** each other. In this way learning becomes a social process, in which different parties learn with and from each other as they overcome problems of common interest or concern. Clearly, the concept of a community of learners in which reciprocal teaching and group problem-solving take place and the concept of action learning have things in common.

Every single person in the programme has to go through the process of the recognition of one's own need to learn, the search for new knowledge, the test of the new knowledge in practice, the critical evaluation of the test results and the consolidation of the whole exercise within the memory. This is best done together, so that every one can help each other.

The result of what has been learned is measured by improvement, as learning implies improved performance. 'Knowledge that has been acquired is exhibited in what has been done with it; this is why it is called action learning, and why knowledge is the ability to do things and not merely to talk about them...' (Revans, 1980).

In the end, action learning is nothing more than a group that struggles with the same kind of problems and in which every member puts his/her ideas and suggestions to constant testing by the others. ' It is not just learning-by-doing, it is learning to learn-by-doing with and from others who are also learning to learn-by-doing' (Revans, 1980).

The need for action learning is made clear by Dixon (1994). She states that individual learning is inhibited and limited by the tendency to look for the evidence that supports the initial view, to give greater weight to more recent events and to fail to check out the inferences made from incomplete data. As organisational learning depends on sound reasoning individuals, this means that organisational learning is inhibited as well. Learning necessitates collaboration, i.e. confrontation and co-operation. The community of learners provides an environment that both initiates and supports development, whereby development is a change in the framework which is used to make sense of the world (Dixon, 1994). The learning individuals need others to see what they have reasoned incorrectly and what they are blind to. In this way learning requires others to accomplish it, either by confrontation in the sense of increased understanding or co-operation.

The Core Leasing System project is the first of what will probably be a series of international projects within Lease Company Holding. It can be treated as an action learning programme because it

concerns a group of people of different nationalities and different functions. They have been brought to one place more or less separated from their home-countries and home LCH subsidiaries with the assignment to jointly achieve a common goal. This strongly resembles 'the small group of comrades in adversity' as it was described earlier. Besides organisational learning is a process that involves the entire organisation and results in the learning organisation. Action learning programmes are set up differently, they are unique, they have a start date and an end date and in between a learning process takes place, but it is not ongoing like with organisational learning. The action learning programmes may be just a short period in the lives of those involved. Each member goes his/her own way after the programme has finished. Now that they have experienced action learning they may continue to practice it, but probably not in the same configuration.

Before we use the theory of action learning to inform our study of the learning process which took place within the project Core Leasing System at Lease Company Holding, we give a short overview of the company and a description of the project.

LEASE COMPANY HOLDING (LCH)

The Holding for Lease Company was established in 1992, but the LC itself was actually founded almost thirty years earlier as a Dutch leasing company set up by a banking corporation. As a phenomenon, leasing originated in the United States as a new way for financing equipment back in the fifties. In these early days of the company leasing was relatively unknown in the Netherlands which resulted in a slow growth of business and profit.

At the beginning of the seventies LC started to offer car leasing. Special about this was that they offered not only the financing of the car, but also a complete package for maintenance, insurance etc... Starting from the mid seventies the opportunities for car leasing were getting better and better. If in early seventies a leased car was only for managing directors and sales managers, after 1974 employees who were lower in the hierarchy could get a leased car as well. Between 1970 and 1980 the company started to expand by setting up other business units in Belgium, Germany, France, and the United Kingdom.

The companies in the different countries are under the control of a Holding. However every country was still free to chose its own strategy, its own development and was in this sense pretty independent from the Holding. As long as the subsidiaries made a fine profit, the Holding did not interfere with their business.

This attitude lasted all through the eighties, but started to change at the beginning of the nineties. This resulted in technical and IT guidelines that were sent out by the Holding for example.

Whereas in 1987 the LCH consisted of 13 countries within which 4 hardware platforms were in use, in 1990 all the daughter companies (except the one in the Netherlands) were all on the same IT platform. Additionally, a Wide Area Network was set up to stimulate communication between the countries, which until then had mainly been between a country and the Holding or the other way around. In 1992 the countries themselves asked the Holding for support on the part of IT and for a strategic view of the Holding for LC as a whole. The Holding became convinced that more co-ordination and steering were indeed required to keep growth and profit at the right track. This was a bitter pill to swallow for those subsidiaries that had been there since the start. They had known a lot of independence, which they had to give up to make room for the directives of the Holding. The younger subsidiaries did not have as much trouble with accepting the new situation. In fact, it were they that had asked for more guidance.

One of the reasons to answer this call for help was that their multinational business clients with subsidiaries in several European countries had new demands. These clients wanted to have one solution for all their subsidiaries instead of different solutions depending on which country the subsidiary of the multinational was in. The Holding discovered that this could not be realised due to the structure of the company. Because of the independent growth of every Lease Company Business Unit in the past, the product structure and the information systems that were used were all different. Different products were sold under the same name in different countries. The necessity to solve this confusing situation was one of the reasons for setting up the Core Leasing System (CLS). The team that develops the CLS consists of 6 couples (five couples represent five important business units. One couple represents the remaining business units and the Holding). They were isolated from their home-bases and were asked to work in one room. Their brief was simple and straight forward: to make a choice for the entire organisation.

The project Core Leasing System:

an introduction

The CLS contains Lease Company business rules and business procedures that are the same in all LC subsidiaries. The main objective of the CLS project was the creation of a Core Leasing System as a DB2/400 database with triggers and stored procedures. The prime reason for this was renewal of the leasing system. Additionally, it was necessary to improve the product management for the international clients which until then had been offered different products under the same name in different countries. Other reasons were to reduce overall costs and to become more of a fleet management and client oriented service organisation than a lease administration company.

The idea was that the CLS increased the flexibility needed to support the leasing process and eventually made centralised steering based on financial results of the leasing process possible. Besides, it reduced overall costs of building and maintaining a leasing system and a reduction in number of staff in relation to the number of cars leased. CLS was to be a system in which all the core data and procedures were stored, which made it easier to sell the same product for international clients and to offer and define a single product for open calculation'. Last but not least, there was more and better structured consolidation of operational data.

There were three possible ways to renew the so called New Operational Leasing System (NOLS), the system that was currently in use and which was to be replaced by CLS:

- to install a complete new system,
- to install something new step by step,
- to change and add new functionalities to the old database.

LCH chose the third way because research at all subsidiaries had indicated that the database was still identical: every system was based on the same basic idea. It still contained the basic principle of a leasing administrating system. Therefore, LCH thought that making the database identical and building in some new possibilities would be the best option. Additionally, it remained possible to add parts to the database that support local needs. LC had decided that everyone had to use the same tool to build these 'local parts'.

This served yet another purpose: in the same development-tools the countries would be able to use each other's applications, which could improve communications between them. In other words, the project CLS is done to support further intemationalisation.

In this project there was a distinction between core, common and local. Core means the business requirements and systems that are at every LC subsidiary. The core consisted of stored procedures (or business rules that all LC subsidiaries had in common, and which took care of the data integrity and consistency of the database) and triggers (the activator of one or more stored procedures). This was the part that was centrally designed and developed in the project CLS. Eventually it would also be maintained centrally from LCH. The so called common and local business requirements could not be

[1] Open calculation is based on the fact that the risk on maintenance costs and residual value is taken by the leasing company. In case of higher maintenance costs then precalculated, the lease company takes the loss; in case of lower costs the client is refunded. The same accounts for the residual value of a lease vehicle. When the residual value is lower then precalculated, the lease company takes the loss; in case of a higher residual value the difference is refunded. In this way the client can earn money by treating the cars properly.

supported by a single system and had to be dealt with separately by every business unit as they covered specific local circumstances.

the working method

The core database was created through discussions by the group members: core business processes were ascertained through local discussions by professionals on a module-by-module basis. These discussions were led by so called Local Co-ordinators (Loco's) who came to the head office of LCH to go through the results of their local discussions. The Database Designers (DBD's) translated the results into functional descriptions for the database.

The work took place in the home countries and at the office of the Holding. In the latter case the work was mainly done in the form of workshops led by a facilitator and attended by either DBD's or LoCo's or both. There was one DBD and one LoCo from every country that participated in the project (Belgium, Germany, France, Netherlands and Great Britain and one of each for LCH). The local co-ordinator was preferably a non-IT business professional with in-depth knowledge of car leasing, he/she co-ordinated the local process discussions held by the business professionals. A DBD was a Database IT-professional, he/she processes the data generated by the core process discussions and created the database design by translating user descriptions into functional descriptions.

The project started in April 1996 and was planned to last nine months. Soon it became clear that it would take much longer to construct the Core Leasing System. Initially, this didn't really affect the project, but to the end of 1997 project management began to tighten the screws and shortly afterwards the structure of the project would be changed in order to speed up the processes.

As was already explained much work is done in the form of workshops where the group members discussed their ideas, criticised each other's work and co-operated to find solutions to encountered problems. The idea was that by talking, criticising and confrontation they would arrive at better solutions and at solutions that everybody felt more comfortable with, than they would have if they had been working separately. After some time several workshop ground rules were made to help the workshop to produce the necessary output in the scheduled time. Among these ground rules are: to have one conversation at a time, to listen to others, all participants are equal, to respect the view of others, etc. The special role of the facilitator is also defined here: he is the only one who can call time-outs and breaks and all participants have to respect that.

- The workshops were participated by either the DBD or the LoCo or both. They were all aware of what was expected from them: 'We must work as a team in all aspects of this project and share information and expertise; communication is the key'. Often it happened that the group members did

not agree on how things needed to be solved, how things should be done, how long it would take to do it, etc., but in the end they did manage to come up with what was asked for. The keywords for these workshops were discussion, co-operation and confrontation.

Sometimes one discussion led to the next. In that case the facilitator stopped the second discussion, asked the group to think it over, to take it up the next day and to return to the first discussion. A group member might be asked to prepare a presentation as a starting point for the discussion of the next day.

The role of the facilitator was very important: he required people to express their arguments and their decision making mechanism to get the discussion to another level. He guided the meetings and discussions in a productive way: he kept the discussions from wandering off in unintended directions and from going too much into detail so that in the end what was intended was indeed covered. The facilitator had authority to say: end of discussion!

The issues to be covered in the workshop were made known in advance by the facilitator. The group members had already investigated them at home and all had their own ideas as to how the issues should be covered. The facilitator invited a group member to express his view concerning a certain issue to the group. The others could react to it. If someone did not understand it, the rest would help him/her to understand, either by explaining it again, by extending on it, by putting it in other words or by giving examples. If someone did not agree with it, he/she could put forward his/her ideas. In this way a discussion developed, led by the facilitator, which had to arrive at a solution that is satisfactorily for all or for the majority.

A workshop normally produced as follows: it started out with a number of outstanding questions on which one or more members gave a presentation, the contents of these presentations were discussed, which was followed by reflection. At the end of the process there was the final feed back. The end of the workshop must reach something the whole team was comfortable with or at least nobody was very uncomfortable with.

The whole process could be over in just a few minutes, but it could also take hours or even days. It all depended on whether or not there were conflicting interests and/or language problems. A discussion could be triggered by a question or (counter)proposal of one of the group members to solve the issue at hand. The result of the discussion could either be a change in the issue when the group members reached consensus on how it should be solved or, when they did not reach consensus, nothing was changed, in which case it would be picked up later on again. This did not mean that the discussion was a waste of time. Revans makes very clear that discussions are the heart of the action learning process. Through discussions every individual member of the action learning group reaches a higher level of understanding of the issue at hand, because he has to defend his

perceptions, views and ideas against those of the others. These 'difficulties' (eventually) turn out to be rewarding for the action learning group, as is argued in the next paragraph.

the difficulties

Things sometimes went wrong because the workshop had up to twelve people with different backgrounds, different interpretations and different learning curves. Not all things were picked up at the same speed by everybody, which might result in questions about details to get a clear and comprehensible picture. This situation generated a lot of discussions. In the end though, this worked out as an advantage. Through intense discussions group members managed to create a good, clear picture and arrive at the same image. They succeeded in transcending the local problems every country had and arrived at the common view that was needed to make the core database. The two groups helped each other to get there: they worked together to translate local problems into core ones, whereby the DBD worked as a mirror for the business people who held another view. This could only be achieved through discussions with a decision waiting to be taken at the end. The final picture was always a compromise, even when a decision had to be taken with consensus. This way of working had a lot in common with what took place in a Community of Learners, the concept of reciprocal teaching and group-problem solving.

Still, discussion itself was sometimes the problem: people felt that they wasted too much time with the discussions. They were frustrated because endless discussions sometimes did not seem to crack the problem at hand or the job that they had to do next week. Additionally, frustration led a lack of motivation. "There still is no agreement on what a service, characteristic, variant and characteristic value are. What one country sees as a service, is seen as a characteristic by another country. This frustrates discussions and the understanding of each others' point of view", observes one participant.

Obviously the group members helped each other understand things. This was necessary as not all the members in the group had the same level of understanding of the subject at hand. This was the case both within the teams of DBD's and LoCo's. For the LoCo's an extra difficulty was the unfamiliarity with the techniques that were used in the project. Besides, they initially didn't want to communicate their ignorance of the matters. Now that was not an issue anymore, which meant that they had learned. This difference in level of skills and capabilities was still a problem, but all group members became more and more capable of helping each other to solve this.

Another difficulty was that the group members were from five different countries, which means five different cultures and five different languages. Especially in the beginning this caused confusion, language problems and conflicting opinions arising from cultural differences. The

different countries and the different groups were taking and holding their stands, defending it and building walls. For example some wanted to do everything themselves, others did not seem to believe wholeheartedly in the project and yet another group had trouble with the democratic way of working within the project. In the course of the project, these problems more or less solved themselves, but others still remained. For example, the two teams did not always comprehend each other, as their tasks were so different. Additionally, they did not always have faith in each other, whereas within each team they did. This was partially a consequence of the language problem in that even if they used the same words in English, they meant something else in their own language and partly a consequence unfamiliarity with each other specific knowledge. The DBD's felt that the LoCo's should not interfere with the actual modelling, that the LoCo's should just bring in the contents and that the DBD's were responsible for modelling. The DBD's felt that they should be trusted they cover everything the LoCo's come up with. This problem was caused by the functional split between LoCo's and DBD's that was brought into the project. Grey areas, grey responsibilities, confusion and frustration were the effects of this functional split. The DBD's did not always respected the skills and capabilities of the Loco's, and vice versa. The LoCo's complained that the DBD's did not take them seriously, because they rushed through the so-called Task Scenarios, that had cost the LoCo's much time to make. According to the Loco's, had the Task Scenario's been dealt with properly, the DBD's would not have had to put in a request for some real life examples, which was done later on. The LoCo's refused to comply with the request and were very angry. One of the group members thought that the DBD's were trying to get control and felt that the DBD's were arrogant.

As time went by...

During the project the group members gradually learned how to deal with each other, how to interpret each other and how to understand each other. In other words, they got to know each other better. This greatly improved the group process that was taking place within the project. Even the fact that some group members left and were replaced by others did not really damage the group process. The new comers had much to learn, but at the same time made their own contribution to the process in that they expressed new ideas and compelled the 'oldies' to rethink accepted ones.

The discussions brought people together and helped to create a clearer picture of what CLS was and of the work involved. They got better hold of the subject and more knowledge of the techniques and tools they were supposed to use and of the process they had to follow. To support the group process they were encouraged to spend time together even after working hours, having drinks, going swimming, jogging, steps or squash. They even went on a ski-weekend together. During this free time it was -strictly forbidden to talk of CLS, nevertheless this remained an important topic of

conversation. Obviously the action learning process was so strong that it even continued outside the office and office-hours. The action learning process profited from the team spirit that was developing both inside and outside the CLS room. Those who could go home to their family every night, instead of the hotel where most of the group members stayed, suffered the consequences of not spending all their time with the group. They were not always informed of new discussions, new solutions and therefore could not always participate fully in the discussions.

Technical devices also helped in overcoming problems: by using groupware, the members could easily communicate with each other, they could read what someone else had put into the database and could comment on it. A CLS glossary was set up to cope with the difficulties of 18 people from 5 different countries, cultures and languages having to work together. In the glossary all important words were explained and defined so that confusion and ambiguity could be reduced.

There are more examples of how IT facilitates this process: a Change Request Procedure was set up: team members published requests for change to the deliverable they were dealing with in the Change Request Database. After discussion by the group, the LoCo's or the DBD's could decide to accept or reject the request for change. By using groupware data could be easily collected and processed in a way that was immediately available to the rest of the group. This was particularly useful at the start of a new module when everybody was working at home investigating the current system that was in use at the home-subsidiary (CLS members interviewing their colleagues and analysing existing information at their own LC subsidiary) and could not come to the head-office to discuss their findings. The groupware turned out to be an important tool to support action learning.

Most of the group members were very committed to the project. This was especially the case at the DBD's: they were spending much of their time at the head-office and acting more like a group than the LoCo's. They thoroughly prepared their workshops and were wholeheartedly participating in the discussions that were going on in the workshops. Even during the coffee breaks, they continued to discuss the issue they were dealing with in the workshop. They were eager to find the best solution for the problem at hand and they achieved it in such a way that everybody had a part in it: they discussed it, someone came up with a solution, they discussed it, someone else came up with a solution he/she thought was better: he/she explained it to the group, they discussed it, etc. On the other hand the LoCo's spent much less time together at the head-office and had more changes in membership in the group. It was because of these changes and relatively few joint sessions that they were only now beginning to show some sort of cohesion. They had fewer discussions than the DBD's and the atmosphere was less relaxed: there were hardly any jokes, fewer laughs, less enthusiasm: some members did not pay attention to what was going on, to what was being discussed. During the breaks they did not talk to each other very much and nor did they continue to work.

As time went by things began to run more smoothly: ‘I must give you all a compliment about the progress. It may seem insufficient, but the effort that was put in is enormous’ and ‘Thank you for the right attitude and all your contributions’ and ‘I was pleased with the way ten to twelve persons could be in one room and actually produce something’ and ‘the consultants like the progress that was achieved by the group. I have noticed that there is a relaxed atmosphere... You should be proud of that’.

At the time when this article was written, the project was not finished yet. The opinion of all involved vary from positive to very positive.

The results for LCH were more then anticipated. Especially on the subject product management as a part of the design of the database it became clear, that the members of the team had learned in a way, that could not have been done otherwise. This area was new for everybody involved, but the group came to a solution which was supported by anyone.

Originally LCH offered one product, open calculation, which differed in the countries because of differences in the market and fiscal reasons (leasing is treated differently in the European countries).

Because of the demand of the local markets the product started to diversify slowly. Another reason was the maturity of the market and the time the leasing company existed in that specific country. The more mature the market and the leasing company the more differences in the product and the more tailor made solutions for the clients.

At the start of the project LCH ended up with a whole set of different products originally based on the same idea, open calculation.

This had a major effect on the way people in the company worked together. The employees in the operational and commercial departments had learned how to handle their way of leasing. When several operational people of different countries came together they could just explain, why their way was the best instead of discussing how leasing could be offered on a global scale. This kept LCH from becoming a real global player.

The solution which was found in the project was to implement a flexible product management allowing different product elements in a product offered to the market. In this way the client can assemble its own product out of the elements offered. At the same time new product elements can be added easily.

Since the group working on the project came from different countries, which had a long history in developing their own versions of the product without any structure, the experience with product management was almost zero. So the proposed framework for product management could not have been developed in the group in such a short time without action learning. Most of the members of the group were technicians not involved in product development. Because the learning process strongly

directed to a solution the group was forced to learn fast and use all the knowledge available or create new knowledge.

The end result the design of the product management database could, of course, have been reached in many different ways. The major problem in this case, however, was to cope with six different views and opinions of six different countries with different levels of knowledge and to end with one solution supported by everybody in the project.

Because of the success of this way of working, the next phase of the project, the building of the database, is set up as an international endeavour, where specialists from different countries work together to produce software to be used in the whole group.

Conclusion

What makes the project CLS so special for LCH is that it is their first international IT development- and implementation project. This means that they had to come up with a special approach to deal with differences in language, culture and organisation in the group that was to create the Core Leasing System. The approach chosen emphasises the group process of being together, discussing, criticising, confronting and learning with and from each other, thereby unknowingly turning the project into an action learning programme. We consciously used this theory to look at the project CLS and discovered some interesting things.

The discussions take the form of reciprocal teaching and group problem-solving situations, trying to reach consensus concerning meaning, relevance and importance of certain aspects, questioning, evaluating and criticising each other, thereby pushing for higher levels of understanding, satisfactory explanations and clarifications. What is most important is that the group members help each other to understand, thereby overcoming the differences in knowledge within the group. This is an ongoing process partly because some group members left and others took their place.

Even though the project is not yet finished (due to some serious delays) and without saying anything about success or failure of the project a few things are already obvious: group members most certainly have learned by working together, they have learned to co-operate, have overcome the communication problems and have bridged the cultural differences between them. They have not only learned *from* each other, they have also learned *with* each other, in the sense that by collective effort the have generated new knowledge, knowledge that was hitherto not possessed by all the participants. In other words: action learning works judging the positive response from the environment and the results that have been made so far.

Our study suggests that action learning is very promising in IT development and implementation projects when one has to deal with the following situation:

- an international project and therefor cultural differences that have to be overcome,
- a difference in the level of knowledge in the group and
- differences in organisational structure.

The role of facilitator should be added to the action learning programme, to keep the group from going into too much detail, to avoid irrelevant discussions. It appeared that this way of working together creates great commitment from everybody in the group.

The results were better then anticipated. Especially in new areas the group came to solutions which were supported by everyone and could be used in the total organisation.

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